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Abstract

In the information age, more educational information could be received by parents with the development of social media, including the excellent performance of other families' children and the advertising of shadow education in China. As the subject of parenting, mothers in China can be more likely to feel strong educational anxiety because of gender division of labor and traditional culture. However, few studies of educational anxiety have considered the effect of social media. Based on the literature on maternal parenting, educational anxiety, and social media, this paper mainly discussed the influence of social media use on maternal educational anxiety in China through questionnaires and semi-structured interviews from the perspective of upward social comparison psychology and gender theory. The research collected 202 valid questionnaires from mothers in China who were aged between 18 and 60 years old. The convenience sampling method was used and quantitative data were analyzed by SPSS 23.0. Besides, 10 mothers volunteered to be interviewed after completing the questionnaire. The results implied that mothers who used more social media can have higher levels of educational anxiety. Under the background of educational industrialization, the educational anxiety that educational institutions sell for profit can destroy the educational ecology to some extent.

Keywords: Maternal Educational Anxiety, Social Media Use, Online Upward Social Comparison, Gender Theory

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Introduction

The advent of the information age has affected all aspects of people's lives. The way people communicate with each other has undergone a dramatic change from letters to the Internet over the past century, and the emergence of social media platforms has provided a new way for people to access, share and exchange information. Social media can refer to an interactive platform built on mobile internet technology, which realizes value through the publication and sharing of information by users (Kietzmann et al., 2011). The popular social media in China today include WeChat, Weibo, Douban, Zhihu, and Xiaohongshu, where people can express their opinions, share their lives and exchange ideas.

Education has always been discussed intensely, as it can be given the expectation of influencing the social order and the future of individuals (Griffin, 2014). Therefore, there are different kinds of educational information that can attract people's attention including the approaches to improving students' academic performance and educational policy interpretation.

Educational anxiety refers to the negative feelings of helplessness, puzzle and pain felt by the participants in the process of education when there is a gap between the actual performance of the educational objects and the expectations of the people engaged in educational activities (Shan et al., 2016). As one of the most typical features of educational anxiety, parents can be overly sensitive to their children's academic performance, employment prospects and life prospects (Chen & Xiao, 2014). In China, competition can take place during the whole process of study, employment, and even marriage due to the large population and the shortage of quality resources (Weng, 2017). The idea of "expecting children to be successful" and the advocacy of "education can change destiny" make education assume the significant task of improving social status, changing family fortune and realizing class leaping (Wu, 2019). A report about family educational investment suggested that 78.3% of Chinese families expressed a willingness to sacrifice their personal lives for their children's education. and it has been increasingly common for mothers to take care of their children's education full-time (Press, 2019). Under the influence of the traditional Chinese cultural concept of "the man is mainly responsible for things outside the home and the woman is mainly responsible for looking after the family", women can have taken on more responsibility for the internal affairs of the family including taking care of the children (Wang et al., 2021). The role of mothers in Chinese urban families has broken away from the traditional connotation of caring for their children and transformed into an "educational broker" (Yang, 2018). Mothers are devoting more energy to planning and accompanying their children's education in order to help them gain an edge in the educational competition (Yang, 2018).

With the advent of the information age and the awakening of women's subjectivity, women have become more connected to the Internet, and women who have entered the social sphere have quickly adapted to this environment and actively participated in it (Xinlian Communications Insight and Analysis, 2018). In addition, mass communication embodies the moral values of society, and women's social and moral perceptions can be influenced to varying degrees by social media, which can lead to mothers being susceptible to messages on social media that reinforce their maternal responsibilities (Song et al., 2018). In such cases, mothers may feel the pressure from both society and themselves in the parenting process.

Theoretical Perspective

Social Comparison Theory

The systematic social comparison theory refers that individuals can be driven by self-evaluation needs and motivations to verify the correctness of their own opinions, so as to understand their own abilities clearly (Festinger, 1954). Gibbons and Buunk (1999) further proposed the "social comparison tendency", arguing that everyone has a natural psychological tendency to compare with others and women can have a higher tendency to do so than men. Besides, social comparison can be regarded as an evaluation of something based on social opinion (Kruglanski et al., 2000).

The emotional impact of upward social comparison on people is divided into two aspects. Under the influence of the assimilation effect, the subject develops a sense of admiration for the better object, triggering a positive emotional experience, while under the influence of the contrast effect, the subject develops an inferiority complex or jealousy after realising the gap that exists between himself and the better individual (Xing & Yu, 2005). Han (2014) suggested that most people tend to choose upward social comparisons to evaluate themselves when making comparisons.

The extension of real-life upward social comparisons to the internet has led to the creation of upward social comparisons on social networking sites, a process whereby users view the bright side of other outstanding individuals and compare themselves to them in terms of specific content during the use of social media (Feinstein et al., 2013).

Gender Theory

Gender theory was originally proposed by feminist researchers, who believed that the differences between genders were not natural, but the manifestation of social culture shaping the collective (Butler, 1999). Within the heterosexual matrix, individuals tend to perform as the 'norm' (Hegarty & Pratto, 2004). Thus, people who are physically male could be expected to behave in masculine ways and demonstrate their masculinity. Conversely, women could be expected to be feminine and to express their femininity through their actions (Butler, 1999; Carrera-Fernández et al., 2018). For example, the role of the women as mothers can be a maternal role assigned by the society, where mothers can be entrusted with the responsibility of accompanying and caring for their children, guiding them in their studies, and socializing them (Jiang, 2016).

This opinion has been vigorously challenged by Maccoby (1988), who argued that it can be almost impossible to demarcate the boundary between masculinity and femininity by assessing because these characteristics are not absolute opposites. However, the binary framework constructed by society can still have a significant influence on the social division of labor.

This study is mainly analyzed from the perspective of social construction in gender theory. In the process of the distribution of social functions between the sexes, there are strong correlations between gender and our duties. Especially in the East Asian cultural circle, the idea that "men work outside and women work inside" has always influenced the construction of social forms. The activities of both sexes are strictly restricted by the social structure (Zhang, 2019).

Method

In this study, on the premise of referring to existing literature and materials, mothers aged between 18 and 60 were surveyed by questionnaire and interview outline to analyze their use of social platforms and their level of education anxiety.

Object of Study

The convenient sampling was adopted in this study, and questionnaires were distributed to the public through the online platform of Questionnaire Star. A total of 322 questionnaires were collected. According to the selected questions of "gender", "age", "mother" and prescribed options, after eliminating invalid questionnaires, a total of 202 valid questionnaires were obtained, with an effective rate of about 62.7%.

Among the 202 valid subjects, mothers aged between 41 and 50 accounted for 49.5% of the total sample. The sample distribution was shown in Figure 1:

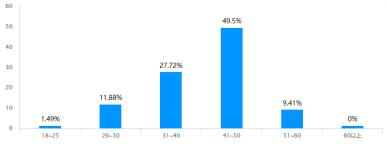


Figure 1: Age distribution of the subjects

In addition, there were 137 mothers who just had one child, accounting for 67.82% of the total. There were 62 mothers with a second child, accounting for 30.69%. The proportion was shown below:

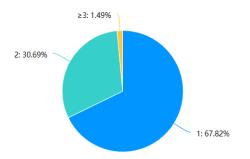


Figure 2: The proportion of the number of subjects' children

Based on the results of the questionnaire, 10 mothers were selected from among those who wished to participate in the interview to conduct a semi-structured interview.

Research Tool

The Questionnaire on Social Media Use and Educational Anxiety was used to investigate the social media use and educational anxiety of the subjects from three dimensions, as shown below:

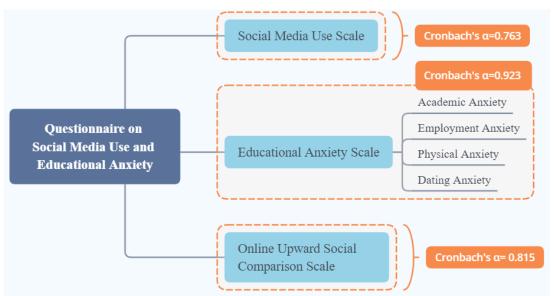


Figure 3: Dimension of the Questionnaire

The results of the structural validity analysis showed that KMO=.866 was greater than 0.7, and the result of Bartlett's spherical test P < 0.001, indicating that the structural validity of the questionnaire was good.

Results

Descriptive Statistics of social media usage of mothers

| | N | т | sd |
|---|-----|------|------|
| Frequency of posting information | 202 | 1.64 | .99 |
| Frequency of use of social media other than posting | 202 | 2.98 | 1.40 |
| Frequency of browsing friends' posts | 202 | 2.92 | 1.21 |
| Frequency of browsing specific friends' posts | 202 | 2.50 | 1.24 |
| Frequency of seeing other children's achievements | 202 | 1.75 | 1.00 |
| Frequency of seeing advertisements for shadow education on social media | 202 | 2.01 | 1.01 |
| Frequency of browsing education information or retrieving education information on social media | 202 | 2.00 | 1.08 |

Table 1: The descriptive statistics of social media usage of mothers

The frequency of posting information is the lowest, about 1-2 times per week. This is followed by a little higher frequency of mothers seeing other parents sharing their children's achievements on social media. In contrast, the frequency of browsing friends' statuses and the frequency of using social media other than posting statuses were both high, close to 1-3 times per day. It shows that the frequency of browsing social media can be higher than posting for mothers, which can imply that mothers may have a stronger willingness to gain information other than proactive sharing.

The differences of mothers' anxiety about their children's academic, employment, physical, and marriage anxiety

Repeated measure ANOVA was performed on the four dimensions of maternal anxiety

towards children. Since the Mauchly test does not satisfy the spherical assumption (P=.000), the corrected G-G coefficient (0.855) is used to achieve the purpose of correcting the P value, as shown in the table.

| Within | | Approx.Chi-Square | | | | | Epsilon ^b | |
|--|------------------------|-------------------|------------|---------------|--------|------|----------------------|------|
| Subjects Effect | Mauchly'W | | | df | Sig. | | G-G | H-F |
| Туре | .700 | 71.2 | 95 | 5 | .000 | | .791 | .801 |
| Table 2: Mauchly's test of sphericityType IIIPartialSourseSum of SquaresdfMSFSig.EtaSquaredSquaredSquaredSquaredSquared | | | | | | | | |
| Туре | Greenhouse- Geisser | 45.052 | 2.374 | 18.980 | 28.943 | .000 | | 126 |
| | | Table 3: Int | ra-group f | actor test re | sults | | | |

 Table 3: Intra-group factor test results

The G-G correction results showed that there were statistically significant differences in the four dimensions of mothers' anxiety about their children's education, F (2.374,477.096)=28.943, P=0.000 < 0.005, P< >²=.126.

| | _ | Pairwise Comparison | | | | | |
|------------------------|-----------------|------------------------|-----------------------|--------------------------|------|--|--|
| | $\bar{x} \pm s$ | (I) Type | (J) Type | MD (I-J) | Sig | | |
| Academic Anxiety | 2.93±.72 | Academic Anxiety | Employment Anxiety | 200* | .006 | | |
| · | | - | Physical Anxiety | .422* | .000 | | |
| D 1 | | E 1 | Marriage Anxiety | .242* | .000 | | |
| Employmen t Anxiety | 3.13±.08 | Employmen t Anxiety | Academic Anxiety | .200* | .006 | | |
| - | | | Physical Anxiety | .623* | .000 | | |
| | | | Marriage Anxiety | .442 | .000 | | |
| Physical Anxiety | 2.51±.08 | Physical Anxiety | Academic Anxiety | .442 422 [*] | .000 | | |
| - | | - | Employment Anxiety | 623* | .000 | | |
| | | | Marriage Anxiety | 181 | .145 | | |
| Marriage Anxiety | 2.69±.07 | Marriage Anxiety | Academic Anxiety | 242* | .000 | | |
| | | | Employment Anxiety | 442* | .000 | | |
| | | | Physical Anxiety | .181 | .145 | | |

and marriage anxiety

As can be seen from Table 4, mothers have a high degree of anxiety about their children in all aspects, among which employment anxiety is the highest, followed by academic anxiety and marriage anxiety. The lowest degree of anxiety is about their children's physical quality.

Many mothers can be influenced by the long-prevailing career ideology of "studying hard and getting a qualification from an elite university are aimed to find a satisfying job", which can have led to mothers' high concern about their children's livelihood. Besides, academic anxiety can be a constant topic for mothers whose children are still in an environment where they are required to take exams to compete for a position.

Differences in social media use and educational anxiety among mothers of different ages

According to the data, the age distribution of the participants was between 18 and 60 years old. According to the social standards, mothers aged from 18 to 40 years old were regarded as the lower age group, and mothers aged from 40 to 60 years old can be seen as the higher age group. It can be seen from Table 5 that there is no significant difference in both the age of mothers' use of social media and their educational anxiety level. It can prove that with the popularization of social media, there might be no significant difference in the frequency of mothers of all ages from 18 to 60 when using social media. Both young and old mothers can find interesting information on social media, and age might not affect their usage. Meanwhile, mothers at all stages of children's development can face educational anxiety.

| | Lower Age Group | | Higher Age Group | | F | Sig |
|---------------------|-----------------|-------|------------------|-------|------|------|
| | Μ | SD | М | SD | | |
| Social Media Usage | 15.73 | 4.94 | 15.87 | 5.38 | .192 | .662 |
| Educational Anxiety | 43.49 | 14.19 | 43.30 | 13.36 | .015 | .903 |

 Table 5: The difference analysis of mothers' social media usage and educational anxiety from different age groups

The correlation analysis of mothers' social media use, online social comparison and educational anxiety

According to Table 6, there is a significant positive correlation between maternal social media use and maternal educational anxiety level. In addition, mothers' social media use and their online social comparison psychology are positively correlated. Online upward social comparison can also predict mothers' educational anxiety.

| | Online Social Comparison | Educational Anxiety | Social Media Usage |
|--------------------------|-----------------------------|------------------------|-----------------------|
| Social Media Usage | 1 | | |
| Educational Anxiety | .183** | 1 | |
| Online Social Comparison | .247** | .570** | 1 |

Table 6: The correlation analysis of mothers' social media use, online social comparison and educational anxiety

It can be implied that the mothers who used social media more can have higher levels of educational anxiety. When mothers are constantly exposed to the "superhuman mother image" created by social media, mothers tend to have a skewed view of themselves and their children. They might ignore that the educational situation presented on social media platforms has been selected to attract them. Mothers with higher levels of online comparison are more likely to be influenced by information about other children's outstanding performance.

| | Academic Anxiety | Employmen Anxiety | t Physical Anxiety | Marriage Anxiety | Social Media Usage |
|--------------------|---------------------|----------------------|-----------------------|---------------------|-----------------------|
| Academic Anxiety | 1 | | | | |
| Employment Anxiety | .704** | 1 | | | |
| Physical Anxiety | .461** | .337** | l | | |
| Marriage Anxiety | .683** | .710*** . | 427** | 1 | |
| Social Media Usage | .195** | .109 . | 158* | .126 | 1 |

The correlation analysis between social media use and mothers' anxiety about their children's academic, employment, physical fitness, and marriage

 Table 7: The correlation analysis between social media use and mothers' academic, employment, physical, and marriage anxiety

It can be known that there can be significant positive correlation among the four aspects of mothers' educational anxiety, so the various types of educational anxiety can be predicted from each other. In addition, mothers' social media use was significantly and positively associated with mothers' academic anxiety and physical fitness anxiety about their children.

The analysis of the interviews

Limited social media usage time

Most mothers indicated that they were busy and struggling with balancing the pressure of family and work. Although two of the interviewees were full-time mothers, dealing with daily household chores and caring for the elderly also took up a lot of their time. Mothers can be restricted in their use of social media, mostly on the way to and from work or after their children have had a break. In China, mothers mainly use WeChat to communicate with others online, and the various parent groups for children have become the main information source for mothers. The study coincided with the outbreak of the Covid-19 epidemic, and parent groups on WeChat played an important role in safeguarding the lives of students. Many of the mothers interviewed said that it had become a daily routine to report their children's health in the group. In addition, teachers also used parent groups to conduct various online teaching through videos and learn about students' learning status.

Increased discernment of online information

Although the data of the questionnaire has shown that more mothers are exposed to educational information on the internet, the more likely their educational anxiety will increase. However, the increased flow of information has also enhanced mothers' ability of discerning information on the Internet to some extent. Interviewees generally reported that although they would see some educational advice and information, they would not blindly subscribe to all the views they read. Most mothers expressed an overall positive perception of their children despite their anxiety about their children's development. Mothers tend to initiate emotional regulation and alleviate anxiety through other aspects of their children's strengths when exposed to information about excellent peers of their children.

Shadow education as a method of relieving educational anxiety

It is important to note that more than 70% of the respondents felt that their children's

education was a heavy financial burden for them. The constant educational advertisements popping up on social media platforms do play a part in mothers' decision of involving their children in out-of-school tuition. Mothers of younger age group reported that they prefer music, art, sports and English classes for their children aged younger than 7 years old, while mothers of students facing examination pressure may choose academic classes according to their children's academic performance.

Discussion

The effect of social media use on mothers' educational anxiety can be influenced by children's age and performance

Children's different ages and daily performance can play a role in regulating mothers' anxiety by affecting mothers' views of their children. Specifically, mothers of children of different ages can have different psychological profiles when faced with the same type of educational information. Mothers of preschool children showed more concern when they are exposed to information about physical growth and intellectual development; mothers of children in primary to high school would have mood swings due to information about subject learning and academic achievement; while mothers of children in university and after employment could be more concerned and anxious about information about employment and marriage.

Children's different performances (academic performance and daily performance, etc.) will also affect the mother's attitude to educational information. When mothers see more promotional messages from education and training institutions on social media, the advertised "guaranteed grades", "full-day class schedule for your child's holiday" and "beware of being overtaken by others" can make parents anxious about their children's academic performance. Mothers of students with poor academic performance can be more likely to worry that their children are at a disadvantage in the academic competition because they are not enrolled in extra-curricular classes. Interviews revealed that mothers with high levels of educational anxiety mostly link their children's performance to their own involvement in their children's schooling. Therefore, when they feel educational anxiety, they can be more likely to take action to alleviate their anxiety by enrolling in extracurricular classes and supervising their children's studies.

Anxiety felt by mothers on social media can be more focused on academic performance

It can be found that there is a significant positive correlation between the time and frequency of social media use by mothers and their academic anxiety for children. Although mothers had the highest levels of employment anxiety for their children, social media use did not have a measurable effect on employment anxiety. It is mainly related to the fact that most of the content shared on social media platforms can be about children of school age, such as videos of hobby classes, volunteer activities, or high school and university admissions. In contrast, mothers' educational anxiety shifts from academic performance to employment and marriage anxiety after their children enter university. Most of the content about their children's employment or marriage would not be shared on social media platforms, but rather in private, face-to-face conversations. It is also found that mothers' anxiety about their children's marriage can be focused on choosing a spouse, while their attitude towards puppy love has been more moderate. Compared to the previous strong social and family attitudes towards puppy love, most mothers nowadays have an understanding attitude towards their children's puppy love, but they also expressed the opinion that such experience should not affect children's academic performance.

Educational messages in social platforms can be a double-edged sword

According to the interview, it is common for mothers to be guided by public opinion and choose to give extra lessons to children. The educational advertisements that constantly pop up on social platforms will indeed be one of the factors for mothers to sign up for classes to some extent. More than 70% of respondents believe that their children's education has brought heavy economic burden to them. However, in contrast to previous studies, this study finds that the increase of information channels also enhances mothers' ability to discriminate against online information.

Conclusion

How much does "mothering love" weigh

The role of fathers in children's education can be self-explanatory, as it has been said that "it is the father's fault if his children are not well educated" from ancient China. However, when there are problems in the upbringing of children in reality nowadays, friends and family and even the mothers themselves attribute the fault to the children's mother, which reflects the fact that men, who are in a dominant position in the social power system, can impose the responsibility for parenting faults on women by controlling the discourse. From the perspective of intensive mothering, it has been generally accepted that mothers are the preferred caregivers of children and therefore mothers should put their children at the center of their lives and even give up their own interests in order to care for children (Intensive Mothering, 2014). This concept of intensive motherhood has been extended to the field of education. In China, there is even a phenomenon called "widowed parenting", which means that the mother is forced to be tied to their children, and the absence of father in the education of their children can be considered understandable (Jin & Yang, 2015). "Widowed parenting" undoubtedly puts pressure on mothers in terms of marriage and life, as well as the development of their children. It can be regarded as a reflection of the unequal status of the sexes in the structure of the family.

Economic development has liberated women from the home but has not recalled men to the family. In addition, the gap between family and social functions still requires women to sacrifice their own time and energy to fill it. Unequal gender systems can be reinforced again in the division of labor in childcare. The emphasis on education does not mean that the role of education belongs exclusively to the mother, but that the scope of maternal love should also be treated fairly in the process of reconstructing the gender system. Therefore, the return of fatherhood can have a positive effect on both children's development and families.

The process of education industrialization and the selling of education anxiety

The rise of the knowledge economy has made education an institutional "exit" to change the destiny of individuals and families (Lauder et al., 2006). The importance of education has been certified from individuals to states. Besides, the evaluation system, with grades as the main criterion, has led to students being defined by "numbers" and constantly labeled into hierarchical categories such as "top students" and "under-achievers". Based on the high priority given to education by society and the strong educational anxiety of parents, shadow education has developed at a high speed. The Chinese Society of Education (2016) reported

that the national market asset size of primary and secondary school tutoring institutions exceeded RMB 800 billion, with 137 million students attending extracurricular tutoring in China. On the one hand, educational institutions can heavily advertise to attract consumers to buy services by emphasizing the importance of grades. On the other hand, mothers who feel educational anxiety can take action to increase their child's competitive edge, such as seeking help from extra-curricular providers (Pan & Wang, 2020). Educational anxiety can be built up during this process, which even could lead to the Bandwagon Effect in extracurricular tuition. Therefore, it may be not a healthy path for the education industry to make a profit by selling educational anxiety. Education and training institutions should make reasonable use of the professional knowledge and skills of their staff to truly focus on student's development and alleviate parents' educational anxiety.

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